

ND-SMAC

North Dakota - State Mapping Advisory Committee

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SMAC ANNUAL MEETING
September 8, 2006

In attendance:

Fred Anderson	ND Geological Survey (Non-Voting)
Ann Fritz	ND Department of Health
Dr. Chad Heinzl	Minot State University
Keith Johnson	Midwest Testing Laboratory, Inc.
Elroy Kadrmas	ND Geological Survey (Non-Voting)
Ron Luethe	Natural Resources Conservation Service
Aaron Norby	Kadrmas, Lee & Jackson
Bob Nutsch	ND Information Technology Department
Tim Penfield	Houston Engineering, Inc.
Larry Ruebel	ND Division of Emergency Management
Corinne Walter	US Bureau of Land Management

Not in attendance:

Dr. Allan Ashworth	ND State University
Rod Bassler	ND State Water Commission
Dr. Dave Bickel	ND Public Service Commission
Brian Bieber	ND Department of Transportation
Girish Budhwar	ND Department of Public Instruction
Chris Dirk	ND Parks and Recreation Department
Levi Erdmann	ND Land Department
Brian Hosek	ND Game & Fish Department
Chris Laveau	US Geological Survey
Dr. Rich Lefever	University of North Dakota
Joseph Martinetti	Interstate Engineering, Inc.
Steve Nagle	Braun Intertec Corporation
Todd Norton	Advanced Engineering and Environmental Services, Inc.
Jeff Quast	ND Department of Commerce
Rachael Seifert	ND Department of Agriculture

Summary of meeting minutes from STATEMAP Priority Discussion

After brief introductions, Fred Anderson (NDGS) initiated discussion of prioritization of geological mapping in North Dakota for the STATEMAP program year 2007 and provided a brief Power Point presentation of current STATEMAP progress and activities. Fred Anderson (NDGS) also provided additional comment on the recent STATEMAP activities that have taken place as a part of the STATEMAP 2006 Program Year in addition to other ongoing geologic mapping related activities.

A set of handouts were created and distributed by the NDGS to the committee member attendees that contained geologic mapping areas that are: completed, recently completed, in progress, and planned for completion. These handouts were distributed to the members of the SMAC committee present during the meeting for their information and use during the review and discussion portions of the meeting.

Fred Anderson (NDGS) also provided a brief overview of the FY2007 proposed STATEMAP plan that consists of geologic quadrangles to be completed at the 1:24,000 scale for the Fargo, Valley City, and Bowman areas. Also discussed were the remaining quadrangles that were a part of the ongoing digital compilation work being conducted during the 2006 program year. Explanation was provided to the members of the SMAC committee that the current workload of the surface geologic mapping program is currently handled by three surface geologists and one GIS specialist and that this year's proposed plan would again utilize all of the Survey's available geologic mapping resources.

Fred Anderson (NDGS) inquired to the committee members for input on projects that were unrelated to the proposed STATEMAP priority as proposed. The SMAC committee raised and provided additional comments on the proposed plan as summarized below.

Joe Brennan (NRCS) inquired as to the completeness of the mapping of the Bear Den member of the Golden Valley Formation. Fred Anderson (NDGS) responded that he did believe that the mapping was complete for the majority of the area but not the entire area. Fred commented that he would visit with Ed Murphy (NDGS State Geologist), who has done the mapping in that area to gather his comments.

Ron Luethe (NRCS) inquired as to the priority of quadrangles that would be completed in the Valley City area. Fred Anderson (NDGS) commented that the amount of exposure of slope in the Sheyenne River Valley is greater within the Valley City West Quadrangle and that based on that comment alone an argument could be made for prioritizing the Valley City West Quadrangle over the Valley City East Quadrangle.

A comment was provided by Keith Johnson (Midwest Testing Labs, Inc.) regarding the need for continued mapping in the Fargo area, as dealing with near surface swelling clays continue to be problematic for construction. Keith also commented that with respect to priority of quadrangles in the Fargo area; having the West Fargo South Quadrangle completed before the West Fargo North Quadrangle would likely be most beneficial

because of what he has observed to be the current urban development trends in the Fargo area.

Further comment on the need for mapping in urban areas and in areas with substantial clay-soils issues was provided by Aaron Norby of Kadrmas, Lee, and Jackson. Aaron commented that mapping focused in these problematic areas of North Dakota would be beneficial and should be a priority.

Ann Fritz (NDDH) commented that it should be noted that the amount of staff currently dedicated to the geologic mapping effort in the state is “woefully inadequate” to keep pace with the continued need for geologic mapping.

Ron Luethe (NRCS) and Joe Brennan (NRCS) asked if any type of edge matching activity is performed during the mapping process for individual quadrangles. Fred Anderson (NDGS) explained to the SMAC committee that when an individual geologic map is completed, in an area with no previous mapping, edge matching is generally not a great concern, as the mapping is likely to be the first mapping conducted in an area and would be, as a result, built upon in adjacent quadrangle mapping. Fred Anderson (NDGS) also commented that edge matching is generally performed by individual mappers working on multiple adjacent maps in the same area but that when several geologists are working the same area, on multiple maps, often the edge matching activity has not been performed, due primarily to the constraints of available resource and time.

Ann Fritz (NDDH) also commented that having the 1:24,000 scale geologic quadrangles edge matched, particularly in the Bismarck-Mandan area is of need and importance. Fred Anderson (NDGS) commented that the Survey is currently working on the edge matching activity for those maps and that it is a project that is being completed as resources become available.

Bob Nutsch (GIS Tech Committee) commented that perhaps there was a way for the GIS technical committee to assist in providing for additional resources in order to aid in the edge-matching process. Fred Anderson (NDGS) commented that further discussions would be valuable and should be planned.

Fred Anderson (NDGS) requested that each member present provide their written vote on mapping project priority and on the priority of mapping within each project area. Nine of the 11 members present at the meeting (Fred Anderson, NDGS and Elroy Kadrmas non-voting) responded by providing a written summary of mapping project ranking.

The committee co-chairs reviewed the project priority information submitted by the attending committee members, which resulted in the following project area priority:

STATEMAP Priority as recommended by SMAC (Program Year 2007)

1. Fargo Area (As Proposed)
West Fargo South, West Fargo North
2. Bowman Area (As Proposed)
Bowman Quadrangle
3. Valley City Area (As Proposed)
Valley City East, Valley City West
4. Continuation of Compilation Work in North-Central ND (As Proposed)

The Committee provided additional comment on mapping priority in written form in order to aid in the process of reducing the number of proposed quadrangles in the event of a program year funding reduction or cut. The SMAC Committee determined that the West Fargo South and Valley City West would be of higher priority within the Fargo and Valley City mapping areas, respectively.

This concluded the STATEMAP Priority Discussion portion of the meeting.

Other Non-Geologic Mapping Projects or Concerns

Geochemical Study: Lorraine Manz (NDGS), in cooperation with the USGS, NRCS, AND NDSU, is doing an analysis of approximately 1700 sample from 730 sites in North Dakota. The NDGS has started on a preliminary map, with Lorraine Manz (NDGS) and the NRCS in discussions on deciding a final map format. Approximately 90% of the analysis has been done and can be accessed through the USGS at: <http://tin.er.usgs.gov/geochem>

Aquifer Update: by the North Dakota State Water Commission in cooperation with a private contractor. It is still in progress.

DOH Hydrologic Delineation: Still being worked on. Ann Fritz stated all units are in some state of completion with the exception of 3 units in the center of the state. These units are posted on www.discovernd.com/gis. At this time only the polygons are updated. The lines work is not complete and will not be updated until the project is completed.

Items being considered by the North Dakota Geographic Information Systems Technical Committee:

Road Centerlines: Will do a pilot project, looking at using existing data (state, county, and city). Project will tie in to the recent request by the Dept. of Emergency Services for ITD and/or DOT to request general funds to develop the centerlines.

Looking into the feasibility of a statewide county GIS coordinator to work with or in conjunction with the GISTC.

DEMS: Joint Funding Agreement with the USGS. A list has been sent to Ron Wencil to fill in 10 meter DEM coverage around the Devils Lake Area.

NAIP: colored DOQQS

2003 – 1 meter; county mosaics and statewide mosaic are now on the NDGIS HUB.

2004 – 2 meter; county mosaics and statewide mosaic are now on the NDGIS HUB.

2005 – 1 meter; have arrived, being worked on.

2006 – 2 meter

2007 – ? meter

The GISTC may not acquire the 2006 NAIP, because it is 2 meters. This may also apply to the 2007 NAIP if it is 2 meters. This could change if time-sensitive issues arise and these were needed. Contributions toward their acquisition are always welcome.

GIS Users Conference, October 23-25, 2005 in Bismarck. This GIS Users Conference will also include the Full GIS Technical Committee Meeting on October 23rd, 2005. For more information go to the following address:

North Dakota GIS Users Conference 2006

<http://www.nd.gov/gis/news/2006-conference.html>

Anyone that wants to be on the ND GISTC list server; go to:

<http://www.state.nd.us/gis/contact/email/>

Elroy Kadrmas, SMAC Committee Co-Chair

State Mapping Advisory Committee (SMAC) 2006-2007 Membership

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